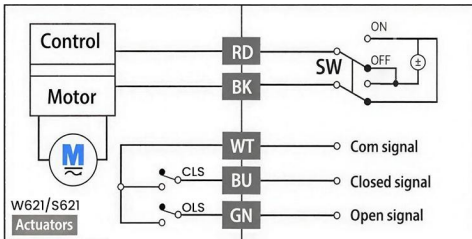


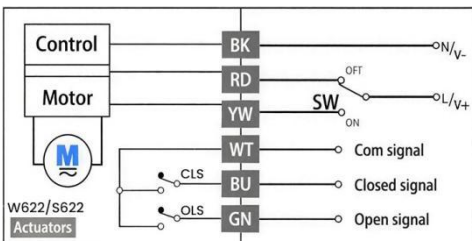
WIRING SCHEMATICS

Our UPVC electric ball valve series offers two configuration options: basic version (without signal feedback) and signal feedback version. The basic version is available in four wiring modes to meet different control needs. The signal feedback version adds three signal wires on the basis of the basic version, enabling real-time feedback of the valve's opening/closing status. The wiring diagrams provided below are for the signal feedback version. For the basic version without signal feedback, simply ignore the signal wire connections shown in the diagrams. Wire Color Coding: The following abbreviations are used for wire colors: BK (Black), RD (Red), YW (Yellow), WT (White), BU (Blue), GN (Green), and OG (Orange). In actuator model numbers, W indicates standard version, S indicates version with signal feedback.



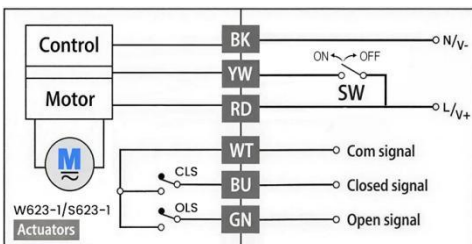
2-WIRE REVERSE POLARITY

This wiring mode uses two power wires to control the valve's opening and closing. Reversing the polarity of the two wires switches the valve's operation direction: one polarity drives the valve to open, and the reversed polarity drives it to close. The signal feedback version adds three signal wires to feed back the valve's current state to the upper controller.



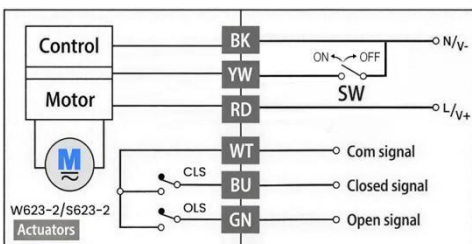
3-WIRE (2-POINT) CONTROL

This mode uses three wires: one common wire, one open-control wire, and one close-control wire. Energizing the open-control wire drives the valve to open, while energizing the close-control wire drives it to close. The valve stays in the current position when power is removed. The signal feedback version adds three signal wires to feed back the valve's current state to the upper controller.



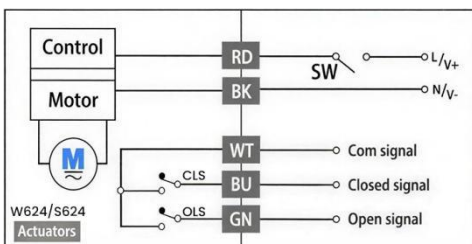
3-WIRE (1-POINT) CONTROL

This wiring configuration includes one common wire, one constant power wire and one control wire. The valve opens when the control wire is connected to positive, and turns off when disconnected. The valve remains in the current position after power is cut off. The signal feedback version adds three signal wires to feed back the valve's current state to the upper controller.



3-WIRE (1-POINT) CONTROL (Negative Control)

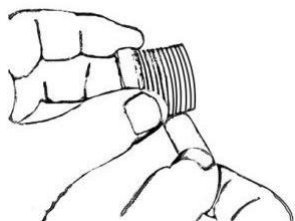
This wiring configuration includes one common wire, one constant power wire and one control wire. The valve opens when the control wire is connected to negative, and turns off when disconnected. The valve remains in the current position after power is cut off. The signal feedback version adds three signal wires to feed back the valve's current state to the upper controller.



2-WIRE AUTO RETURN

This mode features two control wires. When power is applied, the valve drives to the target position (open or close); when the power is cut off, the valve automatically resets to its initial position (usually the closed position) under the action of an internal spring. The signal feedback version adds three signal wires to feed back the valve's current state to the upper controller.

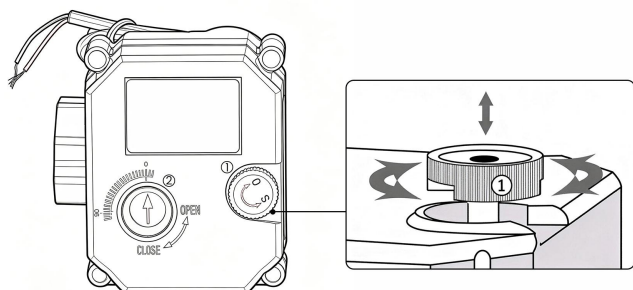
CONNECTION



U.S.Solid Valves follow National Standards for pipe thread. In the U.S.A. we use NPT, while in Europe we use BSPT. We recommend use of teflon tape to ensure seal of the NPT threading, as shown in the figure to the left.

*For any customized connection requirements, please contact our customer service.

MANUAL FUNCTION



- 1) Power off before manual operation. For the Auto-return model, wait at least 30s after power-off for capacitor discharge before manual operation.
- 2) "①" is the handwheel. Lift "①" gently and turn it left or right until the valve is in place. "O"=Open, "S"=Close.
- 3) "②" is the indicator window. External arrow pointing to "O" means fully closed; pointing to "90" means fully open.
- 4) Valve adjustment is complete only when fully open or fully closed. Once the valve is set, press down "①" so the valve works properly on power. Stop operation if any abnormality occurs.

CONTACT

If you have any questions or concerns, please contact us or visit our website for help.

Email: service@ussolid.com

Website: www.ussolid.com



INSTRUCTIONS on ENVIRONMENTAL PROTECTION



At end of life, do not discard with household waste. Dispose of at an e-waste collection point. Contains no toxic substances, but improper disposal harms the environment. Materials recyclable. Contact local authorities for disposal locations.

SPECIFICATIONS

Actuator	Details	
W621/S621	Control	2-Wire Reverse Polarity
	Voltage	DC3~6V/12V/24V/DC9~36V
W622/S622	Control	3-Wire (2-point) Control
	Voltage	DC3~6V/12V/24V/DC9~36V/AC85~265V
W623-1/S623-1	Control	3-Wire (1-point) Control
	Voltage	DC3~6V/12V/24V/DC9~36V/AC85~265V
W623-2/S623-2	Control	3-Wire (1-point) Control (negative control)
	Voltage	DC12V/24V/DC9~36V
W624/S624	Control	2-Wire Auto Return
	Voltage	DC5V/ADC9~36V/AC85~265V

Note1: Auto-return functionality is exclusive to model W624/S624. All other wiring modes are non-resetting types. Only auto-return types have NO/NC distinction.

Note2: In actuator model numbers, W indicates standard version, S indicates version with signal feedback.

Note3: The Voltage listed indicates the available voltage options.

Max.Torque	2 Nm
Seal Material	PTFE
Body Material	UPVC
Medium Temp	33.8°F to 131°F
Ambient Temp	33.8°F to 122°F
Open/Close	≤5 s
Max.Pressure	1.6 MPa
Connect	NPT/G
IP Rating	IP65

Note4: For any customized requirements, please contact our customer service.